COLORED PENCIL ACTIVITY

? Each student needs access to five different colored pencils (black, red, blue, green, and orange).

? Pass out an item and a student response to each member of the class. Example items and student responses are provided.

? Have each student read the item and underline the words in it that indicate to them that the item requires analysis, representation, application, explanation and/or justification. Use the color code:

Black – analysis
Red – representation
Blue – application
Green – explanation
Orange – justification

? Have each member of the class examine the student response to the given item for evidence that the student analyzed the problem, represented the information appropriately, applied the appropriate mathematics concepts, explained the processes they used to solve the problem, and/or justified the conclusion as required by the item. They should point out each criteria addressed by underlining the response using the same color code.

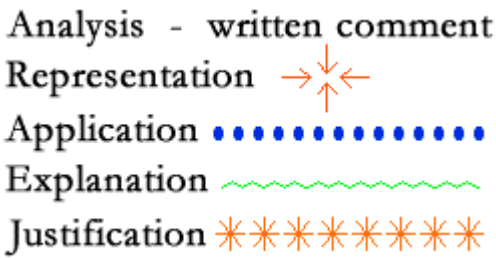
? Students should then compare the item and the student response to determine if all the criteria required in the item is addressed in the answer.

? Repeat this activity with additional items.

Students can learn to evaluate their own work using this method.

The quality of the student responses may also be discussed during this activity.

The examples given in this section are from the prototype items. The code used in the answer key is:

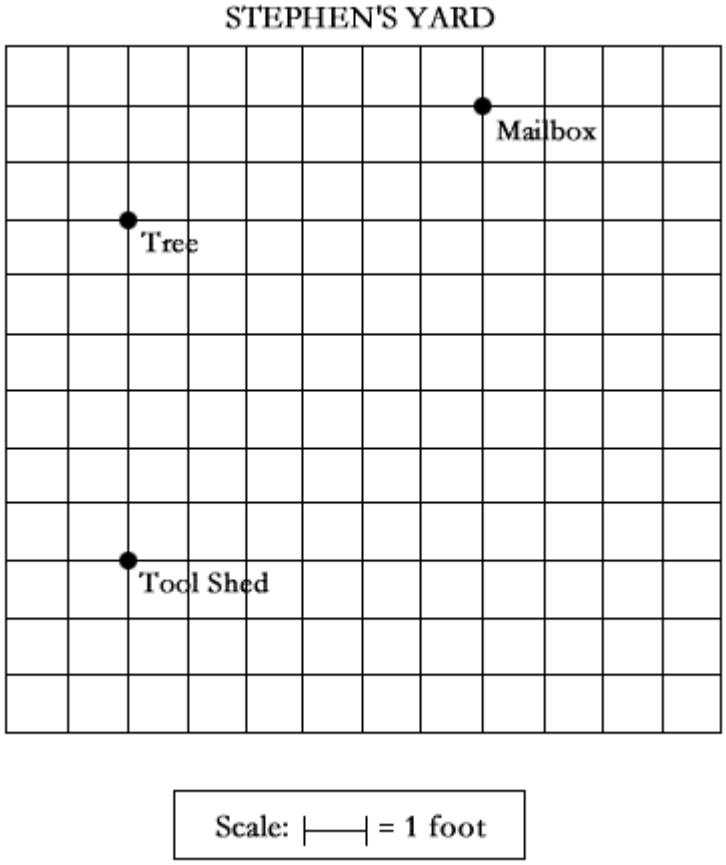


SAMPLE ITEM

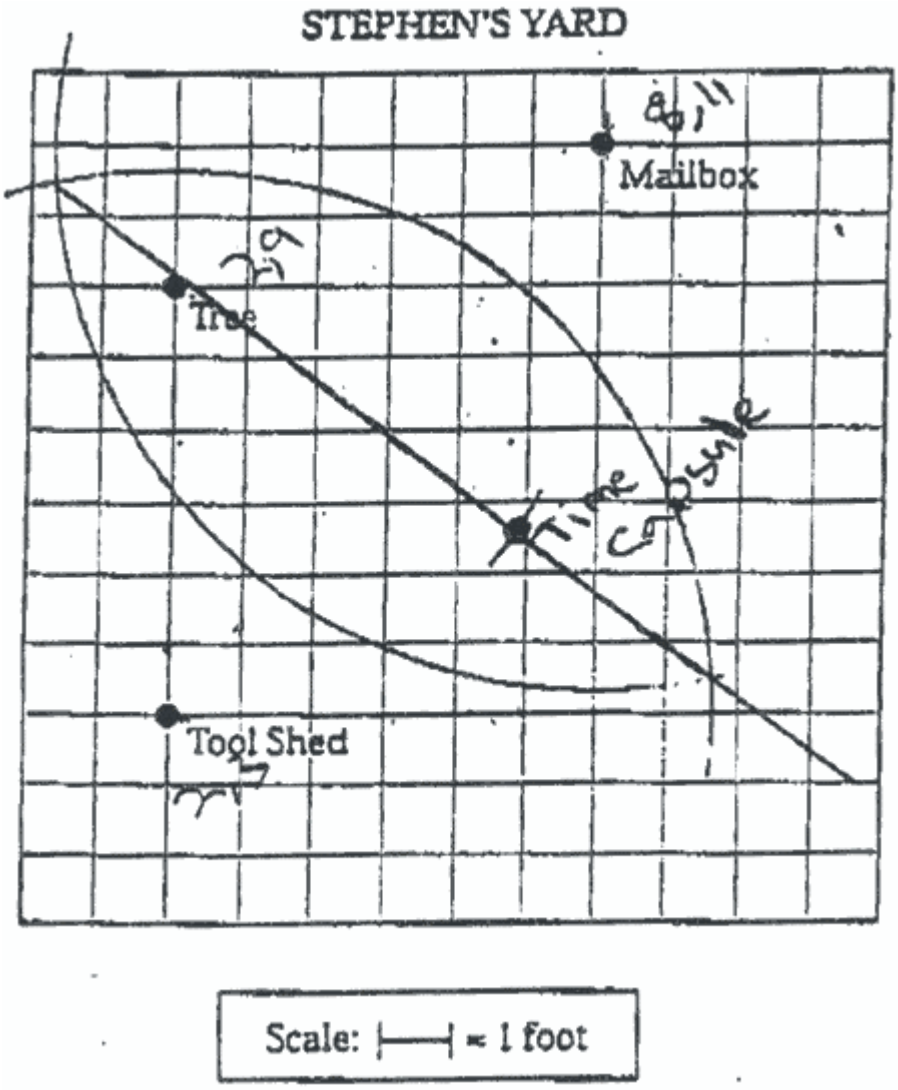
Stephen buried a time capsule in his yard. The distance from the capsule to the mailbox is the same as the distance from the capsule to the tool shed. The capsule is 6 feet away from the tree.

? Construct the location of the time capsule on the grid below.

? Explain the steps on your construction.



STUDENT RESPONSE

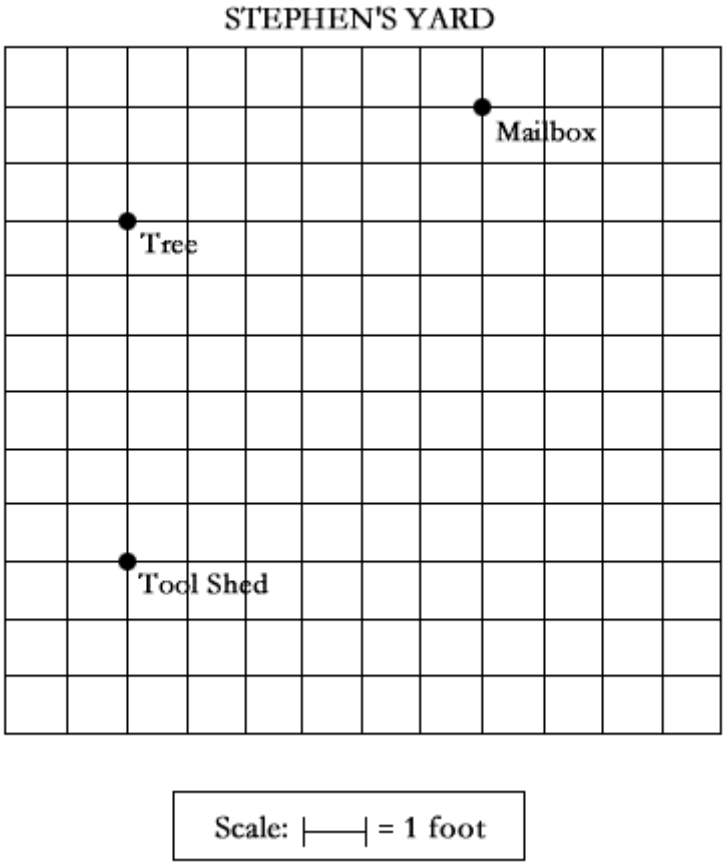


First I found the ⊥ bisector of the imaginary line between the tool shed & the mail box and then measured 6 ft. with my compass, put the point on the tree and marked a mark on the ⊥ bisector of the mail box & the tool shed

ITEM ANSWER KEY

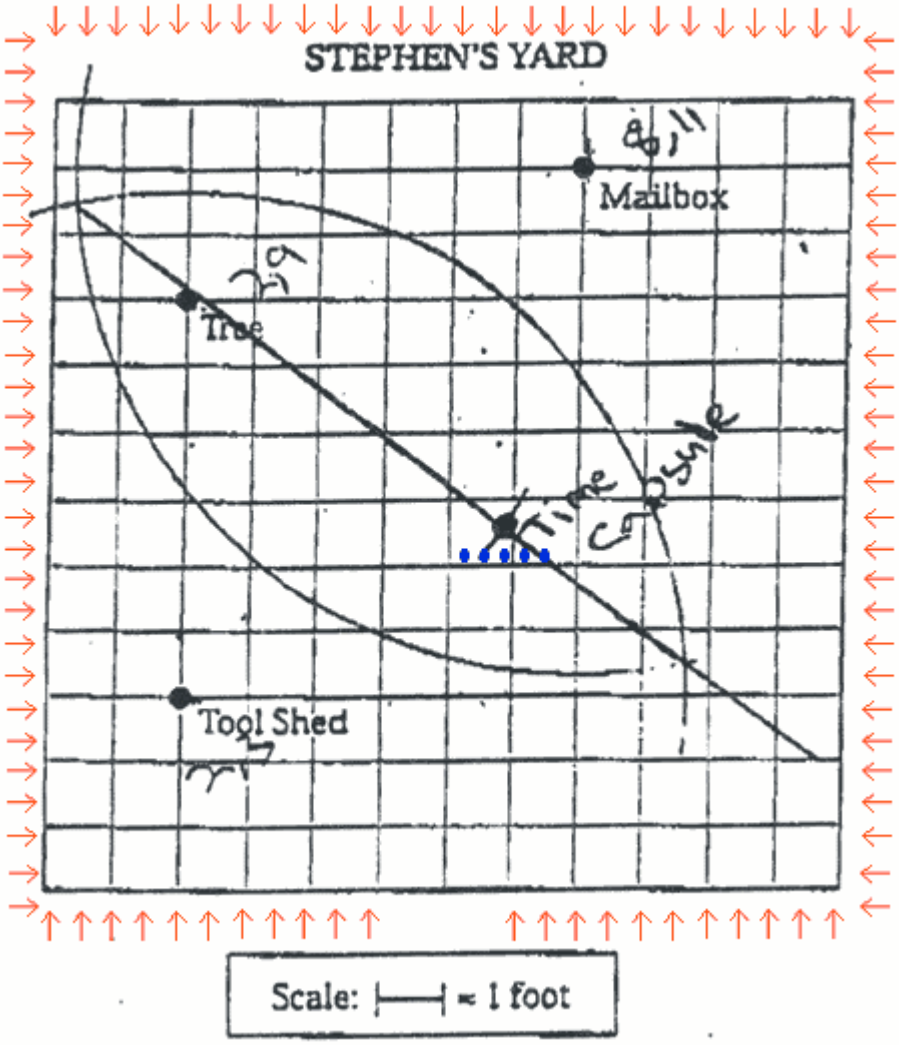
Stephen buried a time capsule in his yard. The distance from the capsule to the mailbox is the same as the distance from the capsule to the tool shed. The capsule is 6 feet away from the tree.

- Construct the location of the time capsule on the grid below.
- Explain the steps on your construction.



Analysis is the understanding of the problem.

STUDENT RESPONSE ANSWER KEY



Analysis- application of a reasonable strategy that leads to a correct solution

First I found the ⊥ bisector of the imaginary line between the tool shed & the mail box and then measured 6 ft. with my compass, put the point on the tree and marked a mark on the ⊥ bisector of the mail box & the tool shed

SCORING GUIDE

? Read the item and underline the words in it that indicate that the item requires analysis, representation, application, explanation and/or justification. Use the color code:

BLACK – ANALYSIS

RED – REPRESENTATION

BLUE – APPLICATION

GREEN – EXPLANATION

ORANGE – JUSTIFICATION

? Examine the student response for evidence that the student analyzed the problem, represented the information appropriately, applied the appropriate mathematics concepts, explained the process they used to solve the problem, and/or justified the conclusion as required by the item. Point out each criteria addressed by underlining the response using the same colored code.

? Compare the item and the student response to determine if all the criteria required in the item is addressed in the answer.